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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,890	02/27/2002	Georges Marcel Victor Thielen	DN2001057	8170

7590

06/11/2003

The Goodyear Tire & Rubber Company  
Patent & Trademark Department - D/823  
1144 East Market Street  
Akron, OH 44316-0001

EXAMINER
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LEE, RIP A

ART UNIT	PAPER NUMBER
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1713

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DATE MAILED: 06/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/084,890

Applicant(s)

VICTOR THIELEN ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 942 042 to Colvin *et al.*

EP 0 942 042 teaches essentially the same composition as that of the present claims. The base rubber comprises high molecular weight (200,000-1,000,000) emulsion SBR and a low molecular weight (20,000-150,000) emulsion SBR in a ratio of 80:20 to 25:75 (page 3, lines 47-51) prepared by coagulation of emulsions of both rubbers (page 4, line 26). Other rubber materials such as natural rubber, *inter alia*, may be incorporated into the composition (page 9, lines 36-53). Other components include 10-250 phr silica (page 12, line 20), silane coupling

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agent (page 11, lines 20-35), approximately 1.45 parts of sulfur (Example 7), and about 2 parts of zinc oxide (Example 4). The description of the physical properties of the rubber composition is identical to that recited in the present claims 3-5 (see abstract and page 8, lines 28 and 31). The rubber material may be used for manufacture of a circumferential tire tread (page 5, line 5). At least one non-productive mixing stage is followed by a productive mixing stage. Final curatives including sulfur vulcanizing agents are typically mixed in the final stage (page 12, lines 48-49). The non-productive mixing occurs at 140-190 °C for about 2-20 minutes (page 12, line 57 and page 13, line 1), and the productive mixing occurs at about 132-166 °C (page 13, line 13). As elucidated above, the prior art teaches a composition that is prepared with a method that is essentially the same described in the current set of claims. The difference lies in the fact that the point of entry of ZnO in the mixing process is not indicated specifically by the inventors.

This point notwithstanding, it is deemed that one having ordinary skill in the art would find it obvious to arrive at the present claims because there is a limited number of options to the procedure, *i.e.*, ZnO can be added either in the non-productive stage or in the productive stage. Furthermore, those having skill in the art are well aware that ZnO, a known vulcanization accelerator or accelerator activator, is routinely used in rubber compositions. Therefore, the skilled artisan would find it obvious to include ZnO in the productive mixing stage because, as shown above, Colvin *et al.* clearly describe such a process (page 12, lines 48-49).

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colvin *et al.* in view of U.S. Patent No. 5,614,580 to Zanzig *et al.* or U.S. Patent No. 5,674,932 to Agostini *et al.*

The discussion of the disclosures of the prior art from the previous paragraph of this office action is incorporated here by reference. Even if the skilled artisan, having read the Colvin *et al.* reference, were still uncertain as to which step to incorporate the additive, he or she would find it obvious to add it in the productive mixing step because this is shown in Zanzig *et al.* (Table 1) and in Agostini *et al.* (Table 4). The combination is obvious because all references relate to vulcanization of rubber compositions.

The prior art made of record but not relied upon is considered pertinent to the Applicant's disclosure. The following references relate to compositions containing high molecular weight and low molecular weight emulsion SB rubbers.

U.S. Patent No. 6,458,884 to Colvin *et al.*

U.S. Patent No. 6,455,655 to Colvin *et al.*

U.S. Patent No. 6,166,140 to Sandstrom *et al.*

U.S. 2003/0050370 to Victor Thielen *et al.*

EP 0 942 043 to Sandstrom *et al.*

The following references illustrate the role of zinc oxide in vulcanization of rubber compositions.

U.S. Patent No. 5,994,434 to Uchino *et al.*

U.S. Patent No. 4,342,670 Ahagon *et al.*

U.S. Patent No. 3,989,643 to Aron

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

ral

June 3, 2003



DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700